

1 Remarks

2
3 Amendments to Claims:

4 The claims have been amended in accordance with the revisions to 37 C.F.R.
5 1.121 as set forth in 1267 OG 106 (25 February 2003).

6 Support for the amendments to claim 19 can be found in the specification at page
7 8, paragraph 0031 through page 10, paragraph 0035, and in Fig. 2.

8 Amendments to claim 20 consist of minor grammatical changes for consistency
9 with the amendments to claim 19.

10 Amendments to claim 21 consist of deleting redundant elements in light of the
11 amendments to claim 19 as well as minor grammatical changes for consistency with the
12 amendments to claim 19.

13
14 Rejection of Claims Under 35 U.S.C. § 102:

15 Claims 1-3, 9-11, and 15-17 have been rejected under 35 U.S.C. § 102(b) as
16 being anticipated by US Patent 4,372,246 to Azar et al.

17 A well known tenet of United States patent law is that "[a] claim is anticipated only
18 if each and every element as set forth in the claim is found, either expressly or inherently
19 described, in a single prior art reference." (MPEP 2131). In other words, "[t]he identical
invention must be shown in as complete detail as is contained in the . . . claim." (MPEP
20 2131).

21 The Examiner, in paragraph 2 of the Office action, contends that Azar et al.
22 disclose a fuser assembly 15 comprising a fuser roller 23 having a heat absorptive outer
23 layer 28 on an inner core 27 of a thermally isolating material, a radiant heating element
adjacent and externally to the outer layer of the roller. The Applicant respectfully refutes
the Examiner's contention.

24 Specifically, the Applicant asserts that Azar et al. at least do not disclose a fuser
25 roller having a heat absorptive outer layer on an inner core of a thermally isolating
material.

The Examiner has identified item 27 of Azar et al. as the "core" of fuser roller 23.
However, Azar et al. identify item 27 as a "layer" that coats the surface of core 25 (col. 4,

1 lines 32-36, and Fig. 2). That is, Azar et al. identify item 25 as the "core" of the fuser
2 roller 23, and item 27 as a layer supported on the surface of core 25.

3 Furthermore, the Applicant can find no limitation disclosed by Azar et al. that the
4 coré 25 is a thermally isolating material. To the contrary, Azar et al. state that the core
5 25 of the fuser roller 23 may be made of metal such as copper, aluminum, or steel. It is
6 well known that metal, and especially metal such as copper, aluminum, and steel, is
7 thermally conductive. Thus, Azar et al. teach away from the Applicant's claim element
8 that the fuser roller core be of a thermally isolating material.

9 With regard to the Applicant's claim 1, the Applicant strongly asserts that claim 1
10 recites at least one distinguishable element (an inner core of a thermally isolating
11 material) that is not disclosed by Azar et al. Moreover, the Applicant asserts that Azar et
12 al. teach away from that distinguishable element. That is, as explained above, Azar et
13 al. disclose a fuser roller having an inner core of metal, which is a thermally conductive
14 material.

15 Therefore, the Applicant contends that claim 1 is not anticipated by Azar et al.
16 because Azar et al. do not disclose all the elements of claim 1.

17 With regard to claim 2, that claim depends from claim 1 and thus contains all the
18 elements of claim 1 in addition to those specifically recited in claim 2. In view of the
19 arguments presented above with respect to claim 1, and by virtue of the fact that claim 2
20 depends from claim 1, it follows that claim 2 is also not anticipated by Azar et al.

21 Furthermore, the Applicant contends that claim 2 recites additional elements that
22 are distinguishable from Azar et al. Specifically, claim 2 recites an "exterior release
23 layer." Azar et al. disclose the use of "typical release agents" for use with the "fuser
24 member" (col. 5, lines 15-19). However, Azar et al. do not disclose an exterior release
25 layer. The Applicant contends that an "exterior release layer" is not equivalent to "typical
release agents."

Thus, because claim 2 recites elements that are not disclosed by Azar et al., the
Applicant contends that claim 2 is not anticipated by Azar et al.

With regard to claim 3, that claim depends from claim 1 and thus contains all the
elements of claim 1 in addition to those specifically recited in claim 3. In view of the
arguments presented above with respect to claim 1, and by virtue of the fact that claim 3
depends from claim 1, it follows that claim 3 is also not anticipated by Azar et al.

Furthermore, claim 3 recites elements that are not disclosed by Azar et al.
Specifically, claim 3 recites "an inner metal layer and an outer elastomer layer." While

1 Azar et al. disclose an inner layer 27 and an outer layer 28, the inner layer 27 of Azar et
2 al. is "composed of a foam of a flouroelastomer" (col. 4, lines 53-54), and the outer layer
3 28 of Azar et al. is "a silicone elastomer having an iron oxide filler dispersed therein . . ."
(col. 4, lines 34-36).

4 That is, the inner layer as recited in the Applicant's claim 3 is metal while the
5 inner layer of Azar et al. is foam of a flouroelastomer. The Applicant contends that an
6 inner layer of foam of a flouroelastomer is not equivalent to an inner metal layer. The
7 Applicant contends that the inner metal layer recited in claim 3 is not disclosed by Azar
et al., and therefore claim 3 is not anticipated by Azar et al.

8 With regard to claim 9, that claim depends from claim 1 and thus contains all the
9 elements of claim 1 in addition to those specifically recited in claim 9. In view of the
10 arguments presented above with respect to claim 1, and by virtue of the fact that claim 9
depends from claim 1, it follows that claim 9 is also not anticipated by Azar et al.

11 With regard to claim 10, that claim depends from claim 1 and thus contains all the
12 elements of claim 1 in addition to those specifically recited in claim 10. In view of the
13 arguments presented above with respect to claim 1, and by virtue of the fact that claim
10 depends from claim 1, it follows that claim 10 is also not anticipated by Azar et al.

14 Furthermore, the Applicant contends that claim 10 recites additional elements
15 that are not disclosed by Azar et al. Specifically, Azar et al. do not disclose a fuser roller
16 that comprises a homogeneous construction of a selected material, said material formed
17 to have a nonporous skin forming said outer layer and a porous internal structure
forming said core. An example of this embodiment is depicted in the Applicant's Fig. 7.

18 Contrarily, the roller of Azar et al. does not comprise a homogeneous
19 construction, but comprises a composite construction of stratified layers (col. 4, line 26
20 through col. 5, line 29, and Fig. 2). That is, Azar et al. do not disclose a roller having a
21 homogeneous construction of a selected material formed to have a nonporous skin
forming an outer layer and a porous internal structure forming an inner core. Thus, the
22 Applicant contends that claim 10 is not anticipated by Azar et al.

23 With regard to claim 11, that claim depends from claim 1 and thus contains all the
24 elements of claim 1 in addition to those specifically recited in claim 11. In view of the
25 arguments presented above with respect to claim 1, and by virtue of the fact that claim
11 depends from claim 1, it follows that claim 11 is also not anticipated by Azar et al.

With regard to claim 15, the Applicant asserts, as in regard to the argument with
respect to claim 1 above, that Azar et al. do not disclose a fuser roller comprising a low

1 thermal mass outer layer surrounding a thermally isolating core. Contrarily, Azar et al.
2 disclose a fuser roller having a thermally conductive core as is explained above with
3 regard to the arguments presented with respect to claim 1. Thus, the Applicant
4 contends that claim 15 is not anticipated by Azar et al. because Azar et al. do not
5 disclose a fuser roller having a thermally isolating core.

6 With regard to claim 16, that claim depends from claim 15 and thus contains all
7 the elements of claim 15 in addition to those specifically recited in claim 16. In view of
8 the arguments presented above with respect to claim 15, and by virtue of the fact that
9 claim 16 depends from claim 15, it follows that claim 16 is also not anticipated by Azar et
10 al.

11 Furthermore, claim 16 recites an interior metal layer and an exterior release
12 layer. As is explained above, while Azar et al. disclose a fuser roller that has an interior
13 layer and an exterior layer, the interior layer of Azar et al. is of a foam of flouroelastomer,
14 while the interior layer recited in claim 16 is a metal layer. The Applicant contends that
15 an interior layer of a foam of a flouroelastomer is not equivalent to an interior metal layer,
16 and thus Azar et al. do not disclose all the elements of claim 16.

17 With regard to claim 17, that claim depends from claim 15 and thus contains all
18 the elements of claim 15 in addition to those specifically recited in claim 17. In view of
19 the arguments presented above with respect to claim 15, and by virtue of the fact that
20 claim 17 depends from claim 15, it follows that claim 17 is also not anticipated by Azar et
21 al.

22 Furthermore, claim 17 recites an interior metal layer as does claim 16. Thus the
23 argument presented immediately above with respect to claim 16 can likewise be applied
24 with respect to claim 17. That is, claim 17 recites an interior metal layer that is not
25 disclosed by Azar et al.

For at least these reasons the Applicant contends that claims 1-3, 9-11, and 15-
17 are not anticipated by Azar et al. Accordingly, the Applicant respectfully requests that
the rejections with respect to those claims be withdrawn and that the claims be allowed.

Rejection of Claims Under 35 U.S.C. 103:

Claims 4-6 and 13-14 have been rejected under 35 U.S.C. 103(a) as being
unpatentable over Azar et al. in view of U.S. Patent 6,442,366B1 to Hartley et al.

1 Furthermore, claims 7-8, 12, and 18-21 have been rejected under 35 U.S.C.
2 103(a) as being unpatentable over Azar et al. in view of U.S. Patent 5,708,920 to
3 Ohnishi et al.

4 The Applicant notes that only one of the above rejected claims (claim 19) is an
5 independent claim. Furthermore, of the claims rejected under obviousness, only claims
6 20 and 21 depend from claim 19. The remainder of the claims (4-8, 12-14, and 18)
7 rejected under 35 U.S.C. 103(a) for obviousness depend either from claim 1 or from
8 claim 15.

9 Importantly, the Applicant notes that neither claim 1 nor claim 15 has been
10 rejected under 35 U.S.C. 103 for obviousness. As is stated in section 2143.03 of the
11 MPEP, "[i]f an independent claim is nonobvious under 35 U.S.C. 103, then any claim
12 depending therefrom is nonobvious." The Applicant contends that since neither claim 1
13 nor claim 15 has been rejected under 35 U.S.C. 103, then both claims 1 and 15 are
14 nonobvious under 35 U.S.C. 103. The Applicant further contends that, therefore, in
15 accordance with the above referenced tenet, all of the claims that depend from either
16 claim 1 or claim 15 are nonobvious. Specifically, since claims 4-8 and 12-14 depend
17 from claim 1, and since claim 18 depends from claim 15, and since claims 1 and 15 are
18 nonobvious, then it follows that claims 4-8, 12-14 and 18 are nonobvious.

19 With regard to claim 19, that claim has been amended as shown above.
20 Specifically, claim 19 now recites the following elements:

21 heating a fusing roller using only radiant heat directed toward a surface of said
22 fusing roller;

23 forming a nip region between said fusing roller and a pressure roller, wherein said
24 nip region has an infeed side and an outfeed side;

25 transporting the media into rolling contact with said fusing roller and through the
nip region to simultaneously heat said toner to a desired temperature and apply pressure
to the toner causing the toner to fuse to the media; and

detecting a temperature differential between said infeed side and said outfeed
side of said nip region.

As mentioned above, claim 19 has been rejected under 35 U.S.C. 103(a) as
being unpatentable over Azar et al. in view of Ohnishi et al.

1 The Applicant contends that the amendments to claim 19 overcome the rejection
2 with respect thereto.

3 As a starting point, MPEP 706.02(j) states:

4 "[t]o establish a *prima facie* case of obviousness, three basic
5 criteria must be met. First, there must be some suggestion or
6 motivation, either in the cited references themselves or in the
7 knowledge generally available to one of ordinary skill in the art, to
8 modify the reference or to combine the reference teachings.
9 Second, there must be a reasonable expectation of success.
10 Finally, **the prior art reference (or references when combined)**
11 **must teach or suggest all the claim limitations.** The teaching
12 or suggestion to make the claimed combination and the
13 reasonable expectation of success must both be found in the prior
14 art and not based on applicant's disclosure." (Emphasis added.)

15 With respect to claim 19, that claim includes the following salient limitation:

16 "detecting a temperature differential between said infeed side and said
17 outfeed side of said nip region."

18 Neither Azar et al. nor Ohnishi et al. disclose detecting a temperature differential
19 between an infeed side of a nip region and an outfeed side of the nip region.

20 Accordingly, under the standard set forth above for a 103 obviousness-type
21 rejection, and with respect to claim 19, the rejection has been overcome because neither
22 Azar et al. nor Ohnishi et al. teach the limitation of detecting a temperature differential
23 between an infeed side of a nip region and an outfeed side of the nip region.

24 Further, it would not be obvious to one skilled in the art to detect a temperature
25 differential between an infeed side of a nip region and an outfeed side of the nip region.
That is, there is simply no suggestion or motivation, either in the references themselves
or in the knowledge generally available to one of ordinary skill in the art, to modify what
is described by Azar et al. or Ohnishi et al. to result in what is contained in Applicant's
claim 19.

With regard to claims 20 and 21, those claims depend from claim 19. As is
explained above, a claim that depends from a nonobvious claim is itself nonobvious.

1 Because the Applicant contends that claim 19 is nonobvious, it follows that claims 20
2 and 21 are also nonobvious for the reasons argued with respect to claim 19.

3 For at least these reasons, the Applicant contends that claims 4-8, 12-14, and 18-
4 21 are non-obvious over Azar et al. Accordingly, the Applicant respectfully requests that
5 the rejections with respect to those claims be withdrawn and that the claims be allowed.

6 New Claims:

7 As shown above, new claims 22-40 have been added.

8 Support for new claims 22 and 23 can be found in the specification at page 3,
9 paragraph 0015.

10 Support for new claim 24 can be found in the specification at page 9, paragraph
11 0033.

12 Support for new claim 25 can be found in previously amended claim 19.

13 Support for new claims 26 and 27 can be found at page 5, paragraph 0020.

14 Support for new claim 28 can be found at page 5, paragraph 0021 through page
15 6, paragraph 0022.

16 Support for new claims 29, 30, 31, and 32 can be found at page 7, paragraph
17 0026.

18 Support for new claim 33 can be found at page 8, paragraph 0029.

19 Support for new claim 34, 35, 36, and 37 can be found at page 8, paragraph
20 0031 through page 10, paragraph 0035.

21 Support for new claim 38 can be found at pages 10 and 11, paragraph 0037.

22 Support for new claim 39 can be found at page 10, paragraph 36.

23 Support for new claim 40 can be found at page 6, paragraph 0024.

24
25 The Applicant contends that, since all of the new claims are dependent claims
and, in view of the Applicant's arguments above in regard the Applicant's contention that
none of the independent claims are anticipated by, or obvious over, the cited references,

1 then it follows that none of the new claims are anticipated by, or obvious over, the cited
2 references.

3 Furthermore, the Applicant contends that all of the new claims recite additional
4 elements that are patentably distinguishable from the cited references. Accordingly, the
5 Applicant respectfully requests that the new claims be allowed.

6 Fee For New Claims

7 Please charge the deposit account as indicated on the attached Transmittal
8 Letter for new claim fees, as applicable.

9 Summary

10 The Applicant believes that this response constitutes a full and complete reply to
11 the Office action, and therefore requests timely allowance of claims 1 through 40.

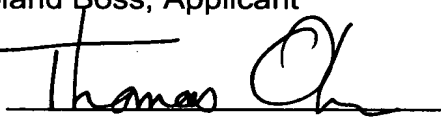
12 If the next Office action is anything other than a Notice of Allowance for claims 1-
13 40, the below-signed attorney respectfully requests that the Examiner call him before
14 issuing the action.

15 Respectfully submitted,

16 Roland Boss, Applicant

17 Date: June 26, 2003

18 By



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